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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,550	07/09/2001	Knut Kahlisch	2000 P 4162	7121

7590 06/14/2002

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EXAMINER

CHU, CHRIS C

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 06/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,550

Applicant(s)

KAHLISCH ET AL.

Examiner

Chris C. Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 10 is/are pending in the application.
- 4a) Of the above claim(s) 8 - 10 is/are withdrawn from consideration:
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Objections

2. Claim 7 is objected to because of the following informalities: "extend into said bonding leads" should be -- extend said bonding leads--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 4, it cannot be determined what applicant regards as “the flowable material [] for forming structures on the support matrix.” Are there some structures on top of the flowable material?

In claim 7, it cannot be determined what applicant regards as “said groove is formed to extend into said bonding leads.” Because the sentence doesn’t make a sense.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 ~ 3 and 5 ~ 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Wiech, Jr.

Regarding claim 1, Wiech, Jr. discloses in Figs. 1 and 2 and column 10, lines 42 ~ 46 a support matrix for integrated semiconductors, comprising:

- a frame (1) having at least one bonding channel (30) with an edge formed therein, said frame further having a groove (10) formed therein along said edge of said bonding channel;
- conductor track structures (18) disposed on said frame, said groove formed in said frame functioning as a barrier for preventing a flow of a flowable material from said bonding channel onto said frame and onto said conductor track structures; and

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- contacts, selected from the group consisting of bonding leads and wires (4), connected to said conductor track structures and disposed in said bonding channel, said contacts used for connecting said conductor track structures to an integrated circuit (2).

Regarding claim 2, Wiech, Jr. discloses in Figs. 1 and 2 said barrier (10) being disposed on all sides of said bonding channel and completely surrounding said bonding channel.

Regarding claim 3, Wiech, Jr. discloses in Figs. 1 and 2 said frame (1) having a surface remote from said bonding leads and said barrier being formed in said surface of said frame which is remote from said bonding leads.

Regarding claim 5, Wiech, Jr. discloses in Figs. 1 and 2 said barrier having a region with a parting agent (24) disposed thereon for repelling the flowable material.

Regarding claim 6, Wiech, Jr. discloses in Figs. 1 and 2 a support matrix for integrated semiconductors, comprising:

- a frame (1) having at least one bonding channel (30) with an edge formed therein;
- conductor track structures (18) disposed on said frame, said frame and said conductor track structures having a groove (10) formed therein along said edge of said bonding channel, said groove functioning as a barrier for preventing a flow of a flowable material from said bonding channel onto said frame and onto said conductor track structures; and
- contacts, selected from the group consisting of bonding leads and wires (4), connected to said conductor track structures and disposed in said bonding channel,

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said contacts used for connecting said conductor track structures to an integrated circuit.

Regarding claim 7, Wiech, Jr. discloses in Figs. 1 and 2 said groove being formed to extend [into] said bonding leads.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiech, Jr. in view of Roberts et al.

Wiech, Jr. discloses in column 10, lines 42 ~ 46 the flowable material for forming a structure on the support matrix.

Wiech, Jr. does not disclose silicone as the flowable material. However, Roberts et al. discloses in column 8, lines 21 and 22 silicone as the flowable material. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wiech, Jr. by using silicone for the flowable material as taught by Roberts et al. The ordinary artisan would have been motivated to modify Wiech, Jr. in the manner described above for at least the purpose of increasing a chip protection.

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Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP-2000-183269, Lee et al. and Sugimoto et al. disclose a semiconductor device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris C. Chu whose telephone number is (703) 305-6194. The examiner can normally be reached on M-F (10:30 - 7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Chris C. Chu
Examiner
Art Unit 2815

c.c.
June 12, 2002



EDDIE LEE
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